

REMARKS

The Office Action of May 29, 2008 is noted, the time to respond to which is extended by Petition and is now set to expire on September 29, 2008. In the Office Action the claims are finally rejected over the Nagaishi '585 reference and under a Non-Statutory Double Patenting Rejection. Applicants provide a suitably signed Terminal Disclaimer and amend the claims to more particularly point out what Applicants believe their invention to be.

As to the art rejection, first, nowhere in the Nagaishi reference is shown or taught measuring range of a moving object.

Nowhere is shown measuring range from an erratically moving object, such as a person walking.

Nowhere is shown templating to address the problem that one does not get a uniform phase difference for erratically moving objects such as people.

Nowhere is shown template matching what one sees in one frequency channel (template) with what one sees in another frequency channel (templates), in which templates uniquely capture difficult-to-detect information relating to non-uniformly moving objects in terms of template matching.

Nowhere is shown measuring phase differences at very low frequencies correlating to small human motions. Note, small human motions do not result in a detectable Doppler tone.

Why is this all important? The purpose of the claimed two-tone system is to be able to detect people moving about. People moving about do not produce fixed phase differences. The Nagaishi system requires Doppler Tones. It does not deal with the low frequencies associated with human movement which the subject system detects by the claimed templating system.

Also, from a system point of view, Nagaishi uses two antennas where one is a transmitting antenna and the other a receiving antenna. In the claimed system there is a single antenna and a circulator used. It is not obvious to use a circulator because of the sensitive phase measuring involved. However, Applicants have been able to establish that templating can work when using a circulator.

Also, the Nagaishi reference in fact uses switching because there is a switching circuit in the VFO, with the VFO used to sweep the frequencies. This switching causes transients.

On the other hand, the claimed system uses two fixed frequency CW signals, thereby avoiding switching. Using two fixed frequencies results in more robustness because it is simpler than the Nagaishi system because there is no VFO, because there is no switching and because the claimed technique is lower in cost.

Most importantly, claimed system uses template matching. If one were to only use phase differences such as shown by the Nagaishi reference, natural distortion in the I and Q channels would give erratic results. Generating templates and matching them reduces the effects of I and Q distortions.

In view of all above differences it is Applicants' contention that the claims are free of the reference. First, the claimed system is not shown by Nagaishi reference. Secondly, the claimed system is not obvious because the Nagaishi system fails to address detecting erratic slow moving objects such as humans. It is one thing to talk about sensing vehicle speed which is relatively constant compared to non-uniform human motion.

Allowance of the claims and issuance of the case is therefore earnestly solicited. Alternatively entry of this Amendment for purposes of Appeal is requested.

Respectfully submitted,



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